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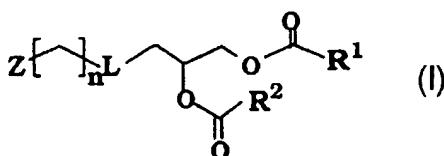
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60/158,693 8 October 1999 (08.10.1999) US

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(54) Title: NEUTRAL-CATIONIC LIPID FOR NUCLEIC ACID AND DRUG DELIVERY

(57) Abstract: A lipid represented by formula (I), wherein each of R¹ and R² is an alkyl or alkenyl chain having between about 8 to about 24 carbon atoms; n = 1-20; L is selected from the group consisting of (i) -X-(C=O)-Y-CH₂-, (ii) -X-(C=O)-, and (iii) -X-CH₂-; wherein X and Y are independently selected from oxygen, NH and a direct bond; and Z is a weakly basic moiety that has a pK of less than about 7.4 and greater than 4.0 is described.

INTERNATIONAL SEARCH REPORT

I national Application No
PCT/US 00/27974

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07D233/54 A61K47/00 A61P43/00 C07H5/06 C07C271/28

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07D A61K A61P C07H C07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97 00241 A (BOEHRINGER MANNHEIM GMBH) 3 January 1997 (1997-01-03) claims ---	1,19
A	US 5 891 468 A (FRANCIS J. MARTIN ET AL.) 6 April 1999 (1999-04-06) column 1 -column 5 ---	1,19
P,X	US 5 965 434 A (JON A. WOLFF ET AL.) 12 October 1999 (1999-10-12) * complete document * ---	1,5,8, 10,11, 19,23
P,X	WO 00 30444 A (VANDERBILT UNIVERSITY) 2 June 2000 (2000-06-02) * complete document * ---	1,19 -/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

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X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

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Date of the actual completion of the international search

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 01 26625 A (ALZA CORPORATION) 19 April 2001 (2001-04-19) claims -----	1-33

FURTHER INFORMATION CONTINUED FROM PCT/SAV 210

Continuation of Box I.2

Claims Nos.: 1-33 (all partially)

Present claims 1, 19 and 30 (and their dependent claims) relate to a composition, respectively a general formula and a method for delivering and they all relate to a formula containing a substituent Z which is not defined in structural terms but is defined as " a weakly basic moiety that has a pK of less than about 7.4 and greater than about 4.0 ". The use of such a parameter in the present context is considered to lead to a lack of clarity within the meaning of Article 6 PCT. It is impossible to compare the parameter the applicant has chosen to employ with what is set out in the prior art. The lack of clarity is such as to render a meaningful complete search impossible.

Consequently the search and the search report can only be considered complete for compounds of the general formula of claim 19 wherein Z is a substituent as in the figures 3A-3C of the present application.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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